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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,172	09/06/2000	Yung-Hui Chen	06720.0061	8931

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1300 I STREET, NW  
WASHINGTON, DC 20005

EXAMINER

NGUYEN, THUAN T

ART UNIT	PAPER NUMBER
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2685

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/656,172

Applicant(s)

CHEN ET AL.

Examiner

THUAN T. NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Election/Restriction*

1. Applicants selects group I from claims 1-31 for examination without traverse in paper no. 5 (11/06/03).

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

*The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.*

3. Claims 1-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Regarding the specifications, input signals (as shown in Figs 8-14) which are RF signals are higher frequencies than the IF or intermediate frequencies. The Tiller reference shows that it is known in the prior art (see Tiller, col. 1/lines 7-57). This claiming technique is doing the opposite of conventionally method for “downconverting” not “upconverting”; and the output signals are in fact lower frequencies than the input signals.
4. Claims 1-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

After carefully studied the present application, the Examiner learns that the entire application is about applying an RF signal (RF/IN) at a single end of a mixer in order to obtain IF signals at the outputs as IF+ and IF- (Figs. 8-14). The process is known in the art as

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“downconverting” not “upconverting”; and an apparatus or a device doing this process should be called “a downconverter” instead of “an upconverter” as claiming throughout the specifications and claim languages. Because IF signals or intermediate frequency signals are signals having lower frequency than the RF signals or radio frequency signals, the device can not be referred to as “an upconverter” for creating an opposite meaning of what it exactly does. Please refer to the attached Tiller reference (col. 1/lines 5-19, Fig. 4, and col. 5/lines 7-13) for the Examiner’s basis of support/statement. The entire application including the claim languages should be revised or corrected properly.

The Examiner holds the art rejection process until this matter can be resolving appropriately later on because of conflicting concepts of the present application as stated and of the claim languages, as for claims 1, 7, 13, 20, 29, and 31 call for an upconverter providing an output at a higher frequency than the input signal, but in fact, the input signal is RF/IN which eventually has a higher frequency than the output IF signals.

### ***Response to Arguments***

5. Applicant's arguments filed on 5/28/04 have been fully considered but they are not persuasive. Although applicants argue that they are allowed to, and are free to, define the meaning of “upconverter” in a way different than other’s definition (applicants admit this), as long as the term is clearly defined in the specifications. Yes, they are allowed to if, i.e., the output signals are delta or gamma or X, Y, Z signals not the IF signals because IF signals are lower in frequencies than RF signals; furthermore, this is unacceptable for the reason that it is clearly technically incorrect in providing an opposite meaning because it gives a misconception of downconverting and upconverting; and it might be construed as a misleading direction for the Examiner in searching and/or finding unsuccessfully related arts, while in fact, in using their own lexicographer, applicants are doing the same technique as others do in prior arts.

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***Conclusion***

**6. Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**


**(703) 872-9306, (for Technology Center 2600 only)**

*Hand-delivered responses should be brought to Crystal Park II,*

*2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).*

**7.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (703) 308-5860. The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM, with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.



**TONY T. NGUYEN**  
**PATENT EXAMINER**

Tony T. Nguyen  
Art Unit 2685  
August 20, 2004